REMARKS/ARGUMENTS

Petition is hereby made under the provisions of 37 CFR 1.136(a) for an extension of one month of the period for response to the Office Action. Authorization to charge the prescribed fee to our deposit account is enclosed.

The Examiner withdrew from further consideration claims 1 to 7 and 22 to 30 as being directed to a non-elected invention. These claims now have been deleted from the application, such deletion being effected without prejudice to the applicants right to file a divisional or continuation application directed thereto.

The Examiner objected to claims 8, 19 and 20 with respect to the use of the abbreviation "d.b.". This abbreviation is now set forth in full (dry basis) in claims 8, 19 and 20.

The Examiner objected to the disclosure on the basis that the specification recites "novel" on pages 1 to 5, 9, 16, 20, 21 and 30. The Examiner suggested removal of the term "novel" from the specification. The term has been retained.

In this regard, the specification is to be read as of its filing date or effective filing date. The canola protein isolates were novel at that time, not having been disclosed by publication or other means.

The Examiner objected to the Abstract in respect of the term "novel canola protein isolate". The Examiner suggested that the term "novel" be deleted. No revision has been made nor, is it submitted, required, with respect to the applicants comments above.

The objection to the disclosure and Abstract in this regard should be withdrawn.

The Examiner provisionally rejected claims 8 to 26 under 35 USC 101 as claiming the same invention as that of claims 8 to 26 of copending Application

No. 11/272,705. As the Examiner notes, the double patenting rejection is a provisional one since the conflicting claims have not in fact been patented.

Nevertheless to avoid this rejection, claims 20 to 26 have been deleted from this application and it is intended to delete claims 8 to 19 from copending Application No. 11/272,705.

Accordingly, it is submitted that the provisional rejection of claims 8 to 26 under 35 USC 101 as claiming the same invention on that of claims 8 to 26 of copending Application No. 11/272,705 should be withdrawn.

The Examiner rejected claims 8 to 26 under 35 USC 103(a) as being unpatentable over Logie et al (US 2004/0034200) in view of Hiron (US 2003/0224099). Reconsideration is requested having regard to the comments made herein.

The present invention as defined in claims 8 to 19 is concerned with the production of a canola protein isolate having an increased proportion of 2S protein isolate. The procedure involves providing an aqueous solution of 2S and 7S proteins consisting predominantly of 2S protein, heat treating the aqueous solution to cause precipitation of 7S canola protein, removing precipitated 7S protein from the aqueous solution, and recovering the canola protein isolate.

Logie et al discloses the preparation of canola protein isolates in the form of a protein micellar mass (PMM) and in a form derived from the supernatant from precipitation of the protein micellar mass. As the Examiner points out, the canola protein isolate in the form of PMM is predominantly a 7S canola protein, comprising about 88 to about 98 wt% of 7S protein, about 1 to about 10 wt% of 12S protein and 0 to about 6 wt% of 2S protein. In addition, as the Examiner points out, the supernatant-derived canola protein isolate is predominantly a 2S canola protein and comprises about 70 to about 95 wt% of 2S protein, about 5 to about 30 wt% of 7S protein and 0 to about 2 wt% of 12S protein.

The supernatant from the PMM formation, which may be concentrated prior to spray drying to obtain the supernatant-derived canola protein isolate, then constitutes an aqueous solution as defined in step (a) of claim 8. Preparation of the PMM and its supernatant is claimed in claim 13.

There is no description in Logie et al of heat treating the supernatant from PMM formation, optionally in a concentrated form, to cause precipitation of 7S canola protein, as recited in claim 8, nor of effecting any such heat treatment step by heating the aqueous solution for about 5 to about 15 minutes at a temperature of about 75° to about 95°C, as recited in claim 11.

The Examiner discusses the Logie et al disclosure and the applicants have no difficulty with the characterization of such disclosure as contained on pages 4, 5 and 6 of the Office Action. The main difficulty arises on page 7 of the Office Action.

On that page, the Examiner discusses experimentation described in Logie et al. In referring to "a second set of experiments", it is assumed that the Examiner is referring to Example 3 of the Logie et al reference on page 10 of the reference. The Examiner is correct that the Logie et al describe in paragraph 0136, extraction of canola protein from canola oil seed meal. The extracted solution is separated from spent meal by centrifugation at 5000 xg for 10 minutes.

The Examiner states in the Office Action that this procedure results in:

> "thus heat treating the aqueous solution to cause precipitation of 7S canola protein, removing the degraded 7S protein from aqueous solution, separating said aqueous protein solution from residual oil seed meal."

There is no evidence to suggest that extracting the canola oil seed meal (which contains the 2S and 7S proteins of canola) at elevated temperature (60°C) results in precipitation of 7S canola protein. In any event, any such result is irrelevant to applicants claims, which relate to an entirely different stage of the procedure of

Logie et al. In Logie et al, the aqueous canola protein solution resulting from the extraction of canola oil seed meal with water is processed to recover PMM and a supernatant, from which further canola protein isolate, predominantly 2S protein, is recovered. As described in Logie et al, where the canola oil seed meal is extracted with water (as in the Example referred to), salt is added to the aqueous canola protein solution to provide a salt concentration of at least 0.10 and preferably at least about 0.15 (see paragraphs 0046 and 0031). The salted aqueous canola protein solution then is processed as described by the Examiner in the Office Action with respect to Figure 1.

In the Office Action, the Examiner states that:

> "Logie et al do not teach a canola protein isolate consisting predominantly of 2S protein, neither do Logie et al explicitly teach the claimed temperature for heat treatment, the claimed amount of molecular weight-cut-off of the membrane, and the claimed amount of 7S protein to be degraded."

It is submitted that the Examiner is incorrect with respect to the Logie et al teaching with respect to a canola protein isolate consisting predominantly of 2S canola protein. This is the supernatant-derived canola protein isolate (see paragraph 0075).

It is submitted, for the reasons discussed above, that the Logie et al reference fails to disclose or suggest heat treatment of the supernatant from the PMM formation and precipitation of 7S protein therefrom. The Examiner is correct that the reference does not disclose the heat treatment conditions recited in claim 11 nor the degree of degradation of the quantity of 7S protein recited in claims 9 and 10.

The Examiner seeks to remedy these defects by reference to the Hiron et al reference. As stated by the Examiner, this reference teaches a food composition comprising a foodstuff and at least one component providing functionality in the food composition. The at least one functionality-imparting component is at least partially replaced by a substantially undenatured canola

protein isolate having a protein content of at least about 90 wt% (N x 6.25), the canola protein isolate exhibiting a canola protein profile which is about 60 to about 95 wt% of 2S protein, about 5 to about 40 weight percent protein and 0 to about 5 wt% of 12S protein (i.e. predominantly 2S protein).

The Examiner may wish to note that the specification of Hiron contains an error in both paragraph 0015 and claim 1 in specifying a range of about 5 to about 90 wt% for the 7S protein. The correct range is about 5 to about 40 wt%, as is evident from the Logie et al reference and the cross-reference thereto in paragraph 0012 of Hiron. (In addition, the Examiner is referred to the corresponding granted US Patents Nos. 7,211,286 and 7,211,288) The canola protein isolate used in Hiron, therefore, is the same canola protein isolate as is the supernatant-derived canola protein isolate of Logie et al and consists predominantly of 2S canola protein. Having regard thereto, it would appear that the Hiron reference is superfluous in view of the disclosure of Logie et al.

In the Office Action, the Examiner states:

> "It would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use the 2S predominant canola protein from Hiron et al since Hiron et al teach that the canola protein isolate can replace or extend the existing protein product. And it has a high quality amino acid profile, bland flavour profile and does not possess detrimental flavour characteristics nor nutritional factors which would adversely affect its employment in food product applications. Since both of the invention of Logie et al and Hiron et al yielded beneficial results in making canola protein isolate, one or ordinary skill in the art would have been motivated to make the modifications and combine two inventions together."

The fact remains that neither Logie et al nor Hiron teach processing the supernatant from PMM formation for any purpose other than for the recovery of a canola protein isolate therefrom. There is no teaching in either reference to heat treat the supernatant for any purpose, let alone to precipitate 7S protein therefrom.

Finally, in the Office Action, the Examiner states that:

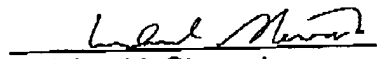
> "Regarding the limitation to the claimed temperature for heat treatment, the claimed amount of molecular weight-cut-off of the membrane, or the claimed amount of 7S protein to be degraded, the result-effective adjustment in conventional working parameters is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan."

Since the teachings of the reference do not suggest the essential heat treatment step of claim 8, it follows that the specific conditions of processing of the supernatant as defined in claims 9 to 11 cannot be considered to be "routine optimization" of a process which is not disclosed or suggested by the prior art.

Accordingly, it is submitted that the claims of this application are patentable over the applied combination or prior art and hence the rejection of claims 8 to 26, insofar as they remain in the application, under 35 USC 103(a) as being unpatentable over Logie et al in view of Hiron et al, should be withdrawn.

It is believed that this application is now in condition for allowance and early and favourable consideration and allowance are respectfully solicited.

Respectfully submitted,



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